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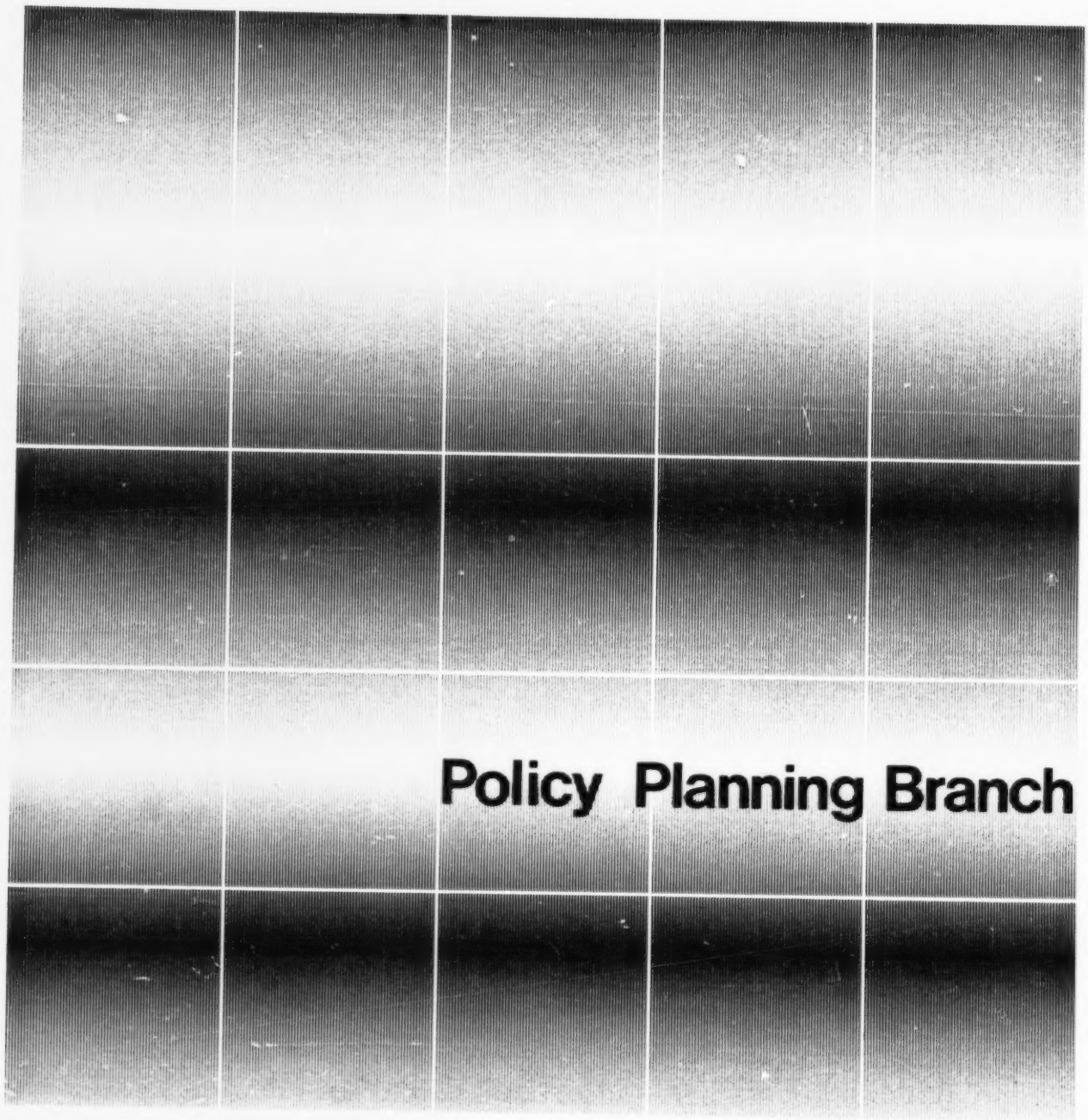

Policy Planning Branch

Bicycle Policy Review

- An Update -

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Policy Development Office
Policy Planning Branch

Published by:
The Policy Planning and Research Division
Ontario Ministry of Transportation and Communications
Hon. James W. Snow, Minister
H.F. Gilbert, Deputy Minister

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October 1981

EXECUTIVE SUMMARY

Background

The Deputy Minister of Transportation and Communications commissioned an "in house" study of bicycling and bicycling facilities in December of 1975 due to increases in bicycle use and accidents. The study, and the companion policy directive, were completed in 1977.

The current policy review was undertaken due to changes in Ontario's energy situation and a petition from the Association of Municipalities of Ontario initiated by the Regional Municipality of Ottawa-Carleton. The following municipalities supported the petition by letters to this Ministry:

City of Waterloo
City of Mississauga
City of Oxford
City of Windsor
Town of Oakville.

The results of this latest review were presented to the Municipal Transportation Planning Committee on October 16, 1981 and were endorsed. A Ministry Directive, approved by the ADM, Provincial/Municipal Transportation, has been issued and is included at the end of this report.

Summary of Findings

The content of this report is based on a review of the changing conditions that have affected bicycle usage since the 1977 study. The following are the major findings:

-- bicycle usage appears to have peaked and is now stable
-- weather conditions negate using the bicycle approximately 75% of the time in Ontario
-- approximately 60% of urban commuters are within cycling distance to their workplace
-- safety for cyclists is no longer strictly a child problem but also a concern for the more mature age groups

-- energy costs will not cause people to change modes onto the bicycle
-- the bicycle will not significantly help solve Canada's long term energy crisis
-- separate bicycle facility construction cannot be justified on a contingency basis as excess road capacity will be available for bicycle use should a shortfall occur.

The following are the major recommendations that resulted from the review of current conditions:

-- bicycle safety should continue in elementary schools
-- this Ministry should continue to support the bicycle for health and recreational purposes
-- paved shoulders should not be provided by the M.T.C. for bicycle usage
-- encroachment permits may be issued for bicycle facilities but only under special circumstances.

A complete list of recommendations may be found in Section 4 of this report.

BICYCLE POLICY REVIEW -- AN UPDATE

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1. Introduction

1.1 Purpose of Study

This study updates and expands the 1977 document entitled "Review of the Ministry's Policy Regarding Bicycling and Bicycling Facilities". The trends presented in that document are updated to discover if there are important changes. Also new information, such as the energy situation and bicycle usage, are examined to determine if these areas warrant any change in current M.T.C. policy.

This update will also respond to external pressure for a review of the current policy.

In summary, then, this document was produced to give a clear indication of M.T.C. policy in regard to bicycling and bicycling facilities.

1.2 Background

A) Review of the Ministry's Policy Regarding Bicycling and Bicycling Facilities

This study was completed within the M.T.C. in 1976 and published in 1977. It was undertaken in response to resolutions that were presented to the Ministry by Ontario municipalities and interest groups. At that time the feeling was that an increase in cycling and a rise in bicycle-auto collisions justified a study.

The Deputy Minister of Transportation and Communications met with representatives from Metro Toronto and interest groups on December 5, 1975 to discuss the current policy on the bicycle. The meeting spawned the study which resulted in the 1977 document. There has been no major revisions of M.T.C.'s bicycle policy (see Exhibit 1-1) since that time.

Planning & Development Division PD-77-02
Memorandum

Ministry of
Transportation and
Communications
Ontario

Memorandum

Assistant Deputy Ministers
Executive Directors
Branch Directors
Regional Directors
District Engineers
Attention: Regional Managers(Drivers & Vehicles)
Managers, Engineering and R.O.W.
Our File Ref. Office and Section Heads

From: G. H. Johnston

Date: June 9th, 1977

In Reply to

bject: Bicycling: Provision of Facilities for and Promotion of Safety Education; Legislation Regarding Bicycles and Bicycling Facilities

This memorandum supersedes and cancels Circular 74-070.

1. PURPOSE

The purpose of this memorandum is to inform Ministry staff of the Ministry's current policy regarding bicycling and bicycling facilities.

2. INTRODUCTION

In response to the increase in the number of bicyclists and miles travelled by them in 1971 and 1973 in Ontario and the resulting rise in accidents in which bicycles were involved, the Ministry prepared a policy position with respect to bicycling in 1974. This position was reviewed again in 1976 to ensure that the existing policy represents current values and needs.

The findings of the review were presented to the Ministry's Strategic Policy Committee in November, 1976. The Ministry's present policy as well as the position endorsed by the committee is set forth under 3. POLICY.

3. POLICY

(1) This Ministry does not consider the provision of special bicycling facilities, such as bicycle paths and lanes, to be the responsibility of road jurisdictions; accordingly, expenditures for such facilities are not eligible for municipal road subsidies.

(2) This Ministry will continue to assist in the planning of urban bicycle facilities by recognizing such expenditures as a sharable cost in municipal planning studies.

...2

RE: Bicycling: Provision of Facilities for and Promotion of Safety Education; Legislation Regarding Bicycles and Bicycling Facilities

(3) To assist municipalities in the recovery of stolen bicycles, this Ministry will develop guidelines for a uniform bicycle registration system, locally administered.

(4) This Ministry will continue to:

(a) Promote bicycle safety, in the broader sense;

(b) Promote the education of cyclists and motorists alike, stressing the necessity that each acknowledge the road-use right of others.

(5) Bicycle safety education programs will be expanded to include reference to bicycle-theft problems and preventive measures.

(6) Bicycle safety education will be made available to all elementary school children through programs of the Ministry of Education.

(7) This Ministry will review the provisions of The Highway Traffic Act and Regulation 416 made under The Highway Traffic Act to determine the most suitable means to ensure that bicycles are manufactured with adequate braking mechanisms and that the owners of bicycles are required to maintain braking systems in proper working order.

(8) The Ministry decided to postpone making recommendations respecting the wearing of protective helmets since apparently there are as yet no standards for such headgear.

(9) (a) Traffic Control devices such as BICYCLE ROUTE Sign Rb-69- and the related Tab Sign Rb-69t- and the BICYCLE PROHIBITION SIGN Rb-67 (which has replaced the former BICYCLES NOT ALLOWED sign) are eligible for subsidy when used on a roadway. These signs are shown in the new edition of the Manual of Uniform Traffic Control Devices, Ontario, which has recently been published by the Ministry.

BICYCLE ROUTE Sign Rb-69 advises motorists of the existence of officially designated bicycle routes along municipal roadways where both bicycles and motor vehicular traffic are permitted.

RE: Bicyling: Provision of Facilities for and Promotion of Safety Education; Legislation Regarding Bicycles and Bicycling Facilities

BICYCLE ROUTE Sign Rb-69 may also be used to indicate officially designated bicycle routes, such as pathways, that do not carry motor vehicular traffic. The sign will be erected to orient the bicyclist to the designated route. This sign, however, is not eligible for municipal road subsidy when it is erected on other than a roadway.

(b) The BICYCLE PROHIBITION Sign, Rb-67, is for use on the approach ramps to a freeway, highway or bridge where bicycles are prohibited by Regulation pursuant to The Highway Traffic Act, or by approved municipal by-law.

(10) Local municipalities may designate for the exclusive use of cyclists any lane of a highway which has been divided into clearly marked traffic lanes. (The Highway Traffic Act, Section 103, Clause (c)).

GHJ:ma

G. H. Johnston,
Executive Director.

In brief summary, the report was divided into four areas; construction and funding, bicycle registration, bicycle safety, and legislation. Bicycle sales and accident data trends were presented and are updated in this report.

The study made recommendations into the four areas already mentioned.

First it was recommended that the M.T.C. not construct or fund special bicycle facilities. No funding for construction has been provided by this Ministry; however, paved shoulders have been provided alongside a highway for bicycle usage near Kingston, with funds provided by the municipality. (See section on Kingston Experience)

Secondly, it was suggested that Drivers and Vehicles should develop guidelines for a uniform locally administered bicycle registration system. It was later determined that this proposal was too expensive to be feasible and the recommendation did not take place.

Thirdly, the Ministry of Education was asked to make bicycle safety compulsory in Ontario's elementary schools. This recommendation was carried out and bicycle safety is still on elementary schools' curriculum.

Finally, it was suggested that current legislation should be changed so that it would be manditory that bicycles have a working brake system. This admendment has not been made to the Highway Traffic Act.

B) The Current Study

The concerns of bicycle registration and legislation have not surface since publishing "Review of the Ministry's Policy Regarding Bicycling and Bicycling Facilities", however there is still some questions on the current policy regarding funding and related safety considerations. This study will address these concerns.

The current policy review had, as its roots, a study of the bicycle in relation to the energy situation. Once that study was underway it became obvious that there were other issues to address. The Regional Municipality of Ottawa-Carleton petitioned the M.T.C. to change its policy (see Exhibit 1-2) on funding of bicycle facilities in light of the current high usage of this mode for "purposeful" trips. The following municipalities supported the petition by writing to the Ministry:

-- City of Waterloo
-- City of Mississauga
-- County of Oxford
-- City of Windsor
-- Town of Oakville.

This study was undertaken to determine how the situation has changed since the 1977 report and to address the new concerns that have arisen about the bicycle since that time.

1.3 Objectives

In summary of the foregoing discussion the following are the objectives of this study:

-- to examine recent changes in bicycle sales, accidents, usage and the energy situation
-- to determine the limit of M.T.C. involvement in bicycle facilities to date
-- to determine what changes, if any, are necessary to M.T.C.'s current policy
-- to determine the level of involvement in municipalities in bicycle facilities.

It is hoped that this study presents a rationale that will allow the policy to stand for some time into the future.

Regional Municipality
of Ottawa-Carleton
222 Queen Street
Ottawa Ontario K1P 5Z3

Regional Clerk

Municipalité Regionale
d'Ottawa-Carleton
222 rue Queen
Ottawa Ontario K1P 5Z3

Greffier régional

October 17th, 1980.

- EXHIBIT 1-2 -

Hon. James Snow,
Minister,
Ministry of Transportation
and Communications,
3rd Floor, Ferguson Block,
Queen's Park,
Toronto, Ontario.

Dear Mr. Minister:

At the Regional Council meeting of September 24th, 1980, Council approved Executive Committee Report No. 388, "Bikeway System - Planning, Implementation and Funding" and the Transportation Committee recommendations contained therein.

One of the proposals, recommended approval of the following resolution:

> "WHEREAS the use of bicycles in most North American cities as a means of travel for medium distance purposeful trips (work, shopping, business, etc.) is increasing in popularity.
>
> AND WHEREAS many municipalities throughout North America are planning systems of bikeways to encourage bicycle travel and increase convenience and safety for cyclists.
>
> AND WHEREAS in Ontario, there is at present no provincial subsidy for bicycle facilities.
>
> BE IT RESOLVED that the Province of Ontario initiate a programme of subsidy to municipalities for the implementation of bicycle facilities similar to that in existance for transit and highways".

A copy of Executive Committee Report No. 388 together with Transportation Committee Report No. 41/80 is attached.

It would be appreciated if you would give this resolution your kind consideration.

Yours truly,

Wm. H. Brunette,
Regional Clerk.

WHB:cg
Attach.

c.c.: Association of Municipalities of Ontario.
Ontario Traffic Conference.

1.4 Scope

It is the intent of this study to examine the policy issues concerning bicycle facilities in Ontario.

The existing budget of the M.T.C. is required by the Municipal Roads and Transit Offices as well as the Provincial Roads program to provide the infrastructure for work trips and goods movements that are essential to Ontario's economy. The bicycle would have to compete with these programs for its funding; therefore, it would have to service the demand for "purposeful" trips (eg. work trips and shopping trips). Due to budget restrictions it would not be feasible to direct funds to a highly recreational form of travel. Since the bicycle's capacity is too limited for most shopping trips, and too slow for most emergency trips, it would have to contribute significantly to commuting if it was to receive funding. Therefore this study concentrates mainly on the commuting trip.

The facts for this study have been collected in a time series so that trends can be extrapolated into the future and policy recommendations will be reasonably farsighted.

2. Policy Consideration

Usage, safety and energy are the areas which have been identified as those which may have changed since the 1977 study was completed. Each of these areas are examined in the following sections.

2.1 Usage

An important consideration in setting a funding policy for bicycle facilities is usage. If the facility is constructed, how much will it be used and for what purposes? This section of the report will outline the potential usage that is possible in Ontario and then discuss some of the limitations to that potential.

A) Bicycle Sales

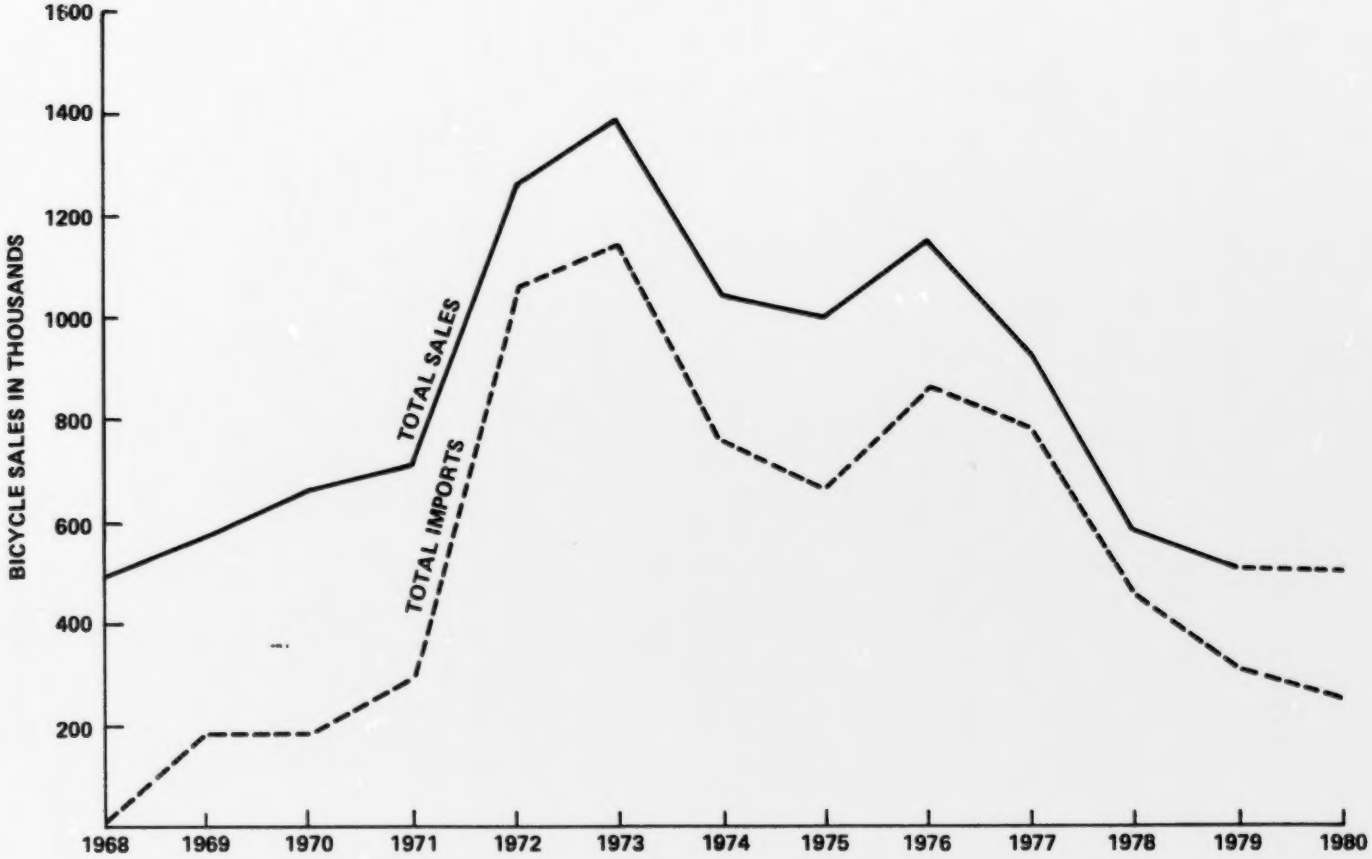
The sales of bicycles give some indication of potential usage and current interest in the mode although there are many factors that affect sales. Figure 2-1 shows the sales for the years 1968 to 1980. The "bicycle boom" years from 1972 to 1976 are shown quite clearly.

The bicycle boom occurred mainly due to the fact that older people (15+ years) were buying bicycles. This demand, for the most part has been met and sales have returned to the pre-boom levels.

The sales trend, therefore, shows that the current level of interest in the bicycle is likely to remain stable but interest is not likely to increase unless current conditions change significantly.

B) Weather Considerations

The Ontario climate negates using the bicycle for parts of the year. For this study it is assumed that the bicycle commuter will ride to work when the day's high is at least 15^{o}C (59^{o}F) or above and there is no rain. It is unlikely



SOURCES: C.C.M. AND STATISTICS CANADA
NOTES: 1976 SALES ESTIMATED DUE TO INCOMPLETE DATA
1980 SALES ESTIMATED ON FIRST THREE QUARTER'S DATA

Figure 2-1 / Bicycle Sales in Canada

that commuters will travel to work by bicycle when the high temperature is less than 15°C as the morning temperature would likely be in the 5° to 10°C range (40°F to 48°F). Figure 2-2 shows the number of days that fit into this category for different parts of the Province and for different temperatures. Assuming that there is 250 working days per year, the following chart illustrates how often the Ontario bicycle rider can pedal to work:

Area of Ontario	Bicycle* Riding Days	Work Days	% of Total Working Days
Southern	114	75	30
Central	100	65	26
Northern	95	60	24

* Includes weekends and holidays.

In Ontario, then, the bicycle rider can commute to work comfortably 25% to 30% of the time. Actually these percentages could be reduced by an additional 5% since many people take their holidays in the summer months.

C) Trip Length

The bicycle is not a mode that can be used by the long distance commuter. For the purpose of this study it is assumed that the bike can be used for trips up to 10 km (6 miles) in length which would take about 35-40 minutes to complete. Trips longer than this could be attempted only by the more physically fit among us.

An examination of trip length in Metropolitan Toronto (see Figure 2-3) indicated that approximately 60% of commuters experienced trips less than 10 km.

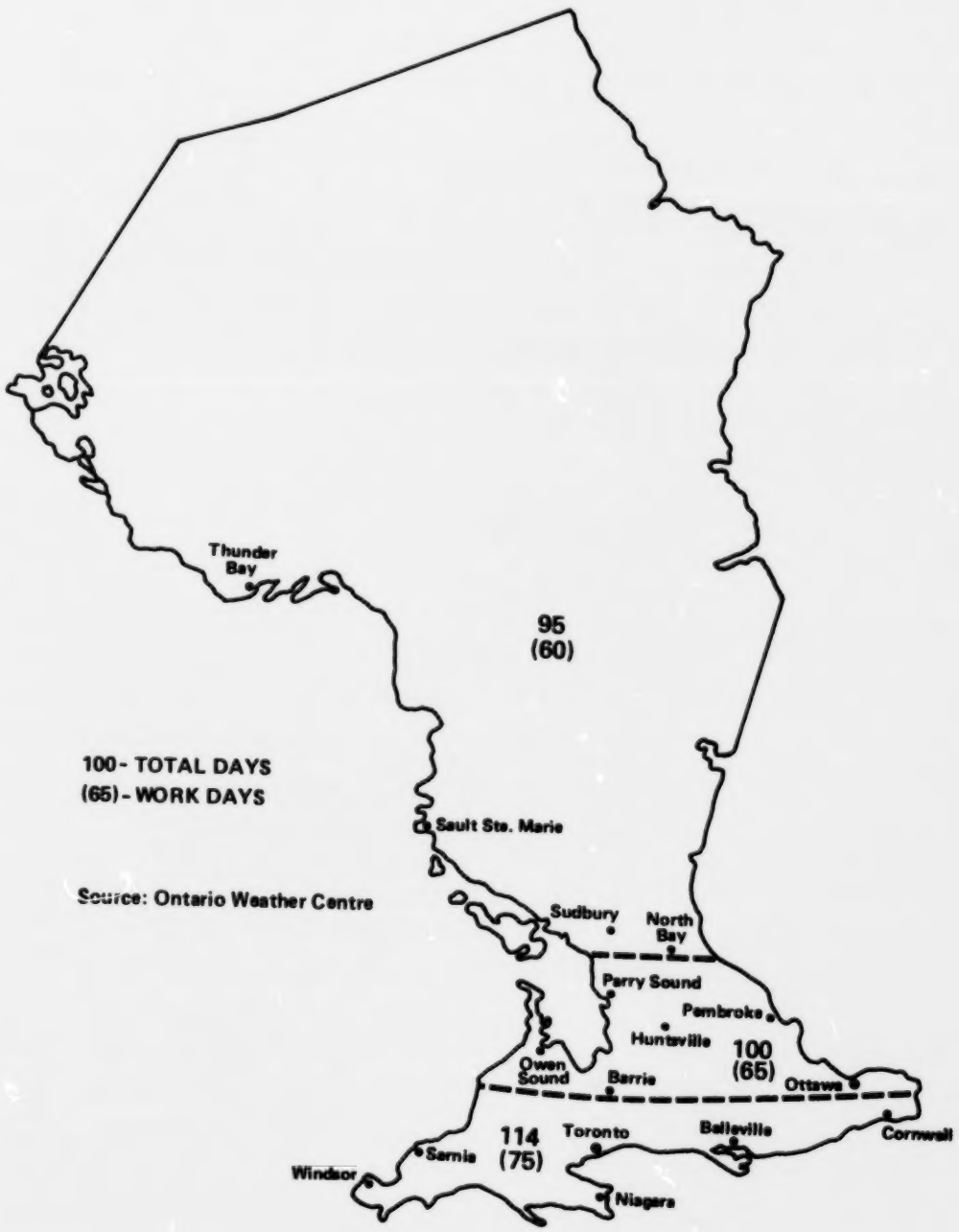


Figure 2-2 / Bicycle Riding Days in Ontario (over 15°C and Dry)

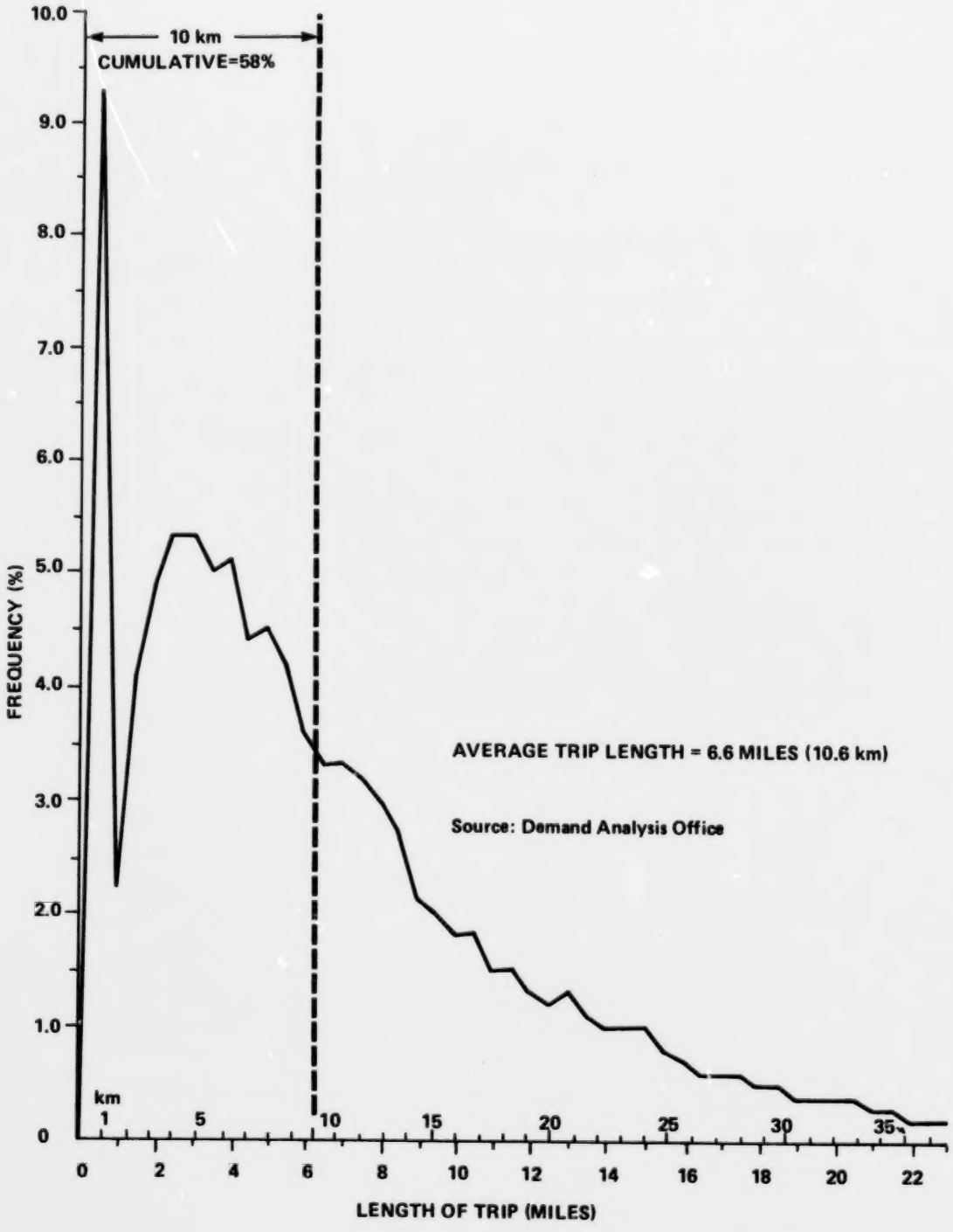


Figure 2-3 / Trip Length Frequency in Metro Toronto (1971)

D) Trip Speed

The bicycle can be competitive, in some instances, when compared with the speed of other modes. A commuter would not take much longer to get to work by bicycle than by auto or bus downtown. However, a similar trip in the suburbs, that has highway travel as an option, may take four times longer (see table) when using the bicycle instead of an auto. The increase in travel time would decrease the demand for bicycle travel in these areas.

Average Modal Speeds in Metropolitan Toronto During Peak*

Mode	Average Speed (mph)	(kph)
Commuter Rail	35	56
Auto (Highway)	35	56
Auto (Suburbs)	15-20	24-32
Subway	15	24
Auto (Downtown)	10	16
Bicycle	8-10	13-16
Bus	8	13

* Estimates only

E) Other Considerations

There are many other factors that affect the modal choice of the bicycle; some of the more important ones are mentioned below.

First there is the comfort aspect of the competing modes. Both transit and the auto offer protection for inclement weather (eg. wind and heat) and a pleasant place to sit. Bicycles cannot offer these conveniences.

Safety is an issue with some of the commuters who do not want to use the bicycle. All vehicles use the same facilities for at least part of the commuting trip and the bicycle is in a prone position in relation to the competing modes.

The mobility of a car is a factor in modal choice. When a car is taken to work it is available for transportation at lunch hours and to unexpected meetings or emergencies.

Another restriction on bicycle use is the health and age of the potential user. Obviously an old or infirm person could not consider the bicycle as a viable mode.

F) Summary

Bicycle usage has peaked in Ontario and is now in a stable or declining phase. Weather and trip length alone limit the potential usage to 15% (ie. .25 x .6) of the total commuter trips taken each year in this province. The other modal choice considerations, such as comfort, trip length and speed, safety and mobility, reduce the actual usage for commuting to virtually zero.

2.2 Accidents/Safety

The 1977 report recommended that the M.T.C. should initiate a bicycle safety program through the Ministry of Education. Such a program was included as part of the health program in elementary schools. The schools also received pamphlets on bicycle thefts and the best way to prevent them.

Since 1975 the number and rates of cyclists' casualities for decreased except for a small jump in 1979 (Figure 2-4). More interestingly, the injuries in the 0-14 year age group (figure 2-5) have decreased constantly and convincingly since 1975, far more than the population decrease in this age group would predict (see Figure 2-6). This decrease in injuries indicates that the safety program initiated by the Ministry of Education has been effective. The injuries in the 15 to 24 years category have been consistent as has its population (see Figures 2-5 and 2-7). The population of the 24+ years category and the number of injuries have both been increasing since 1975. (see Figures 2-5 and 2-8).

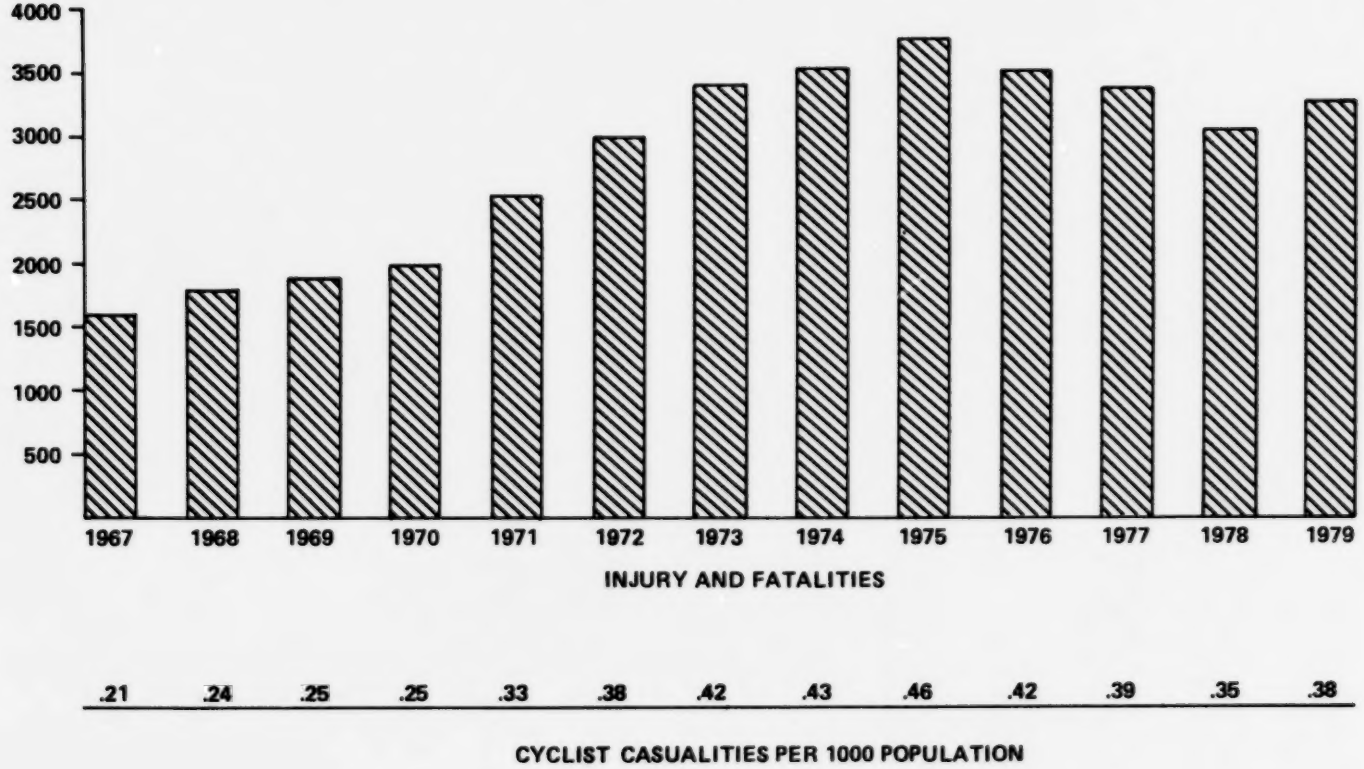


Figure 2-4 / Total Cyclist Casualties

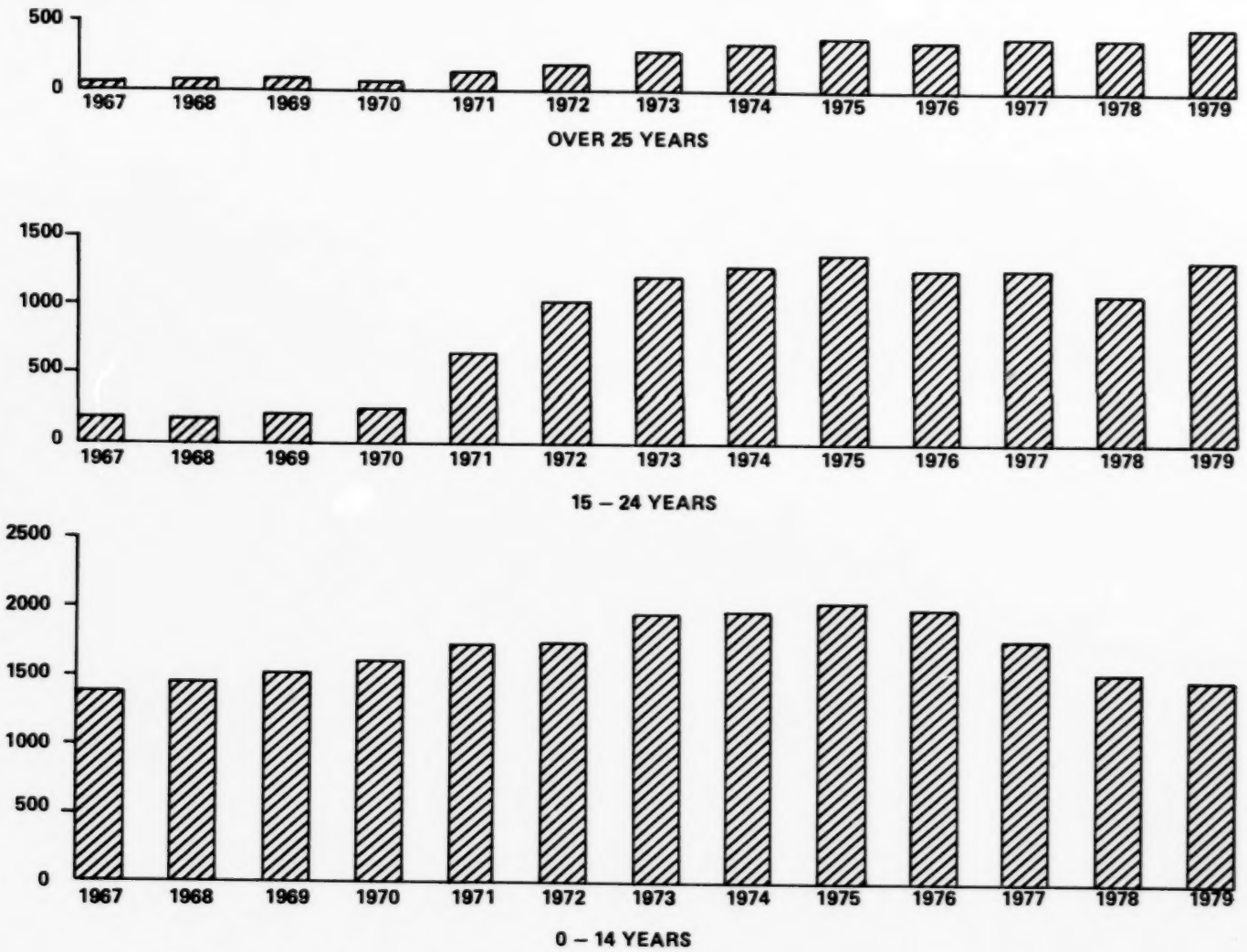


Figure 2-5 / Cyclist Injuries by Age Group on All Ontario Roads

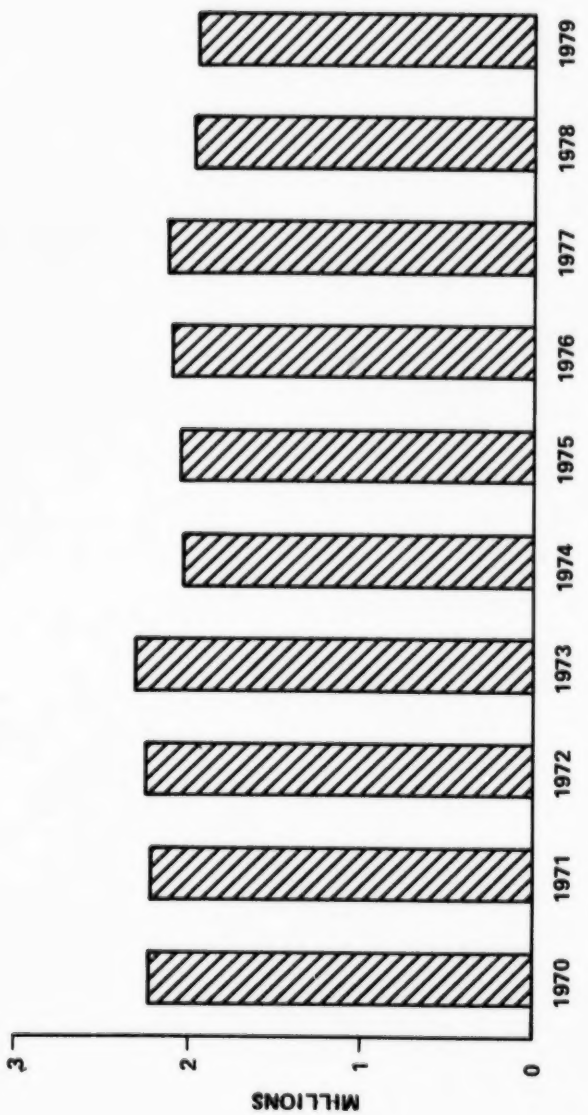


Figure 2-6 / Ontario's Population

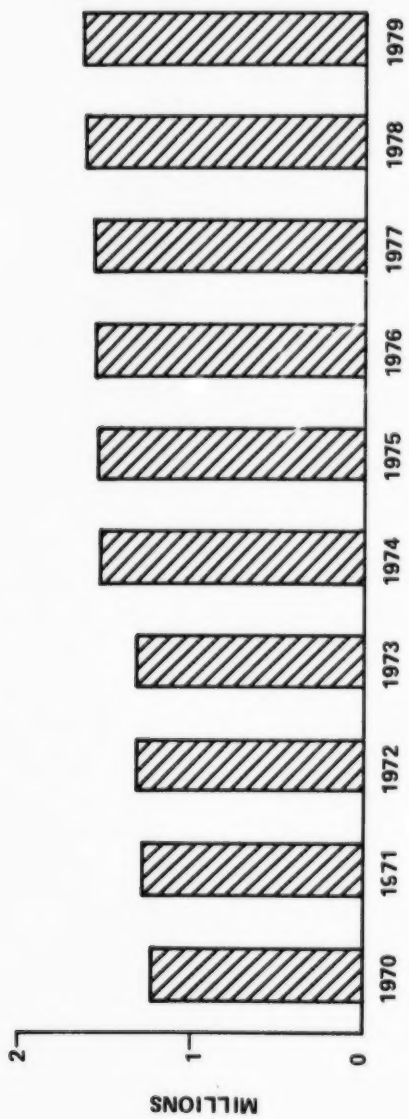


Figure 2-7 / Ontario's Population

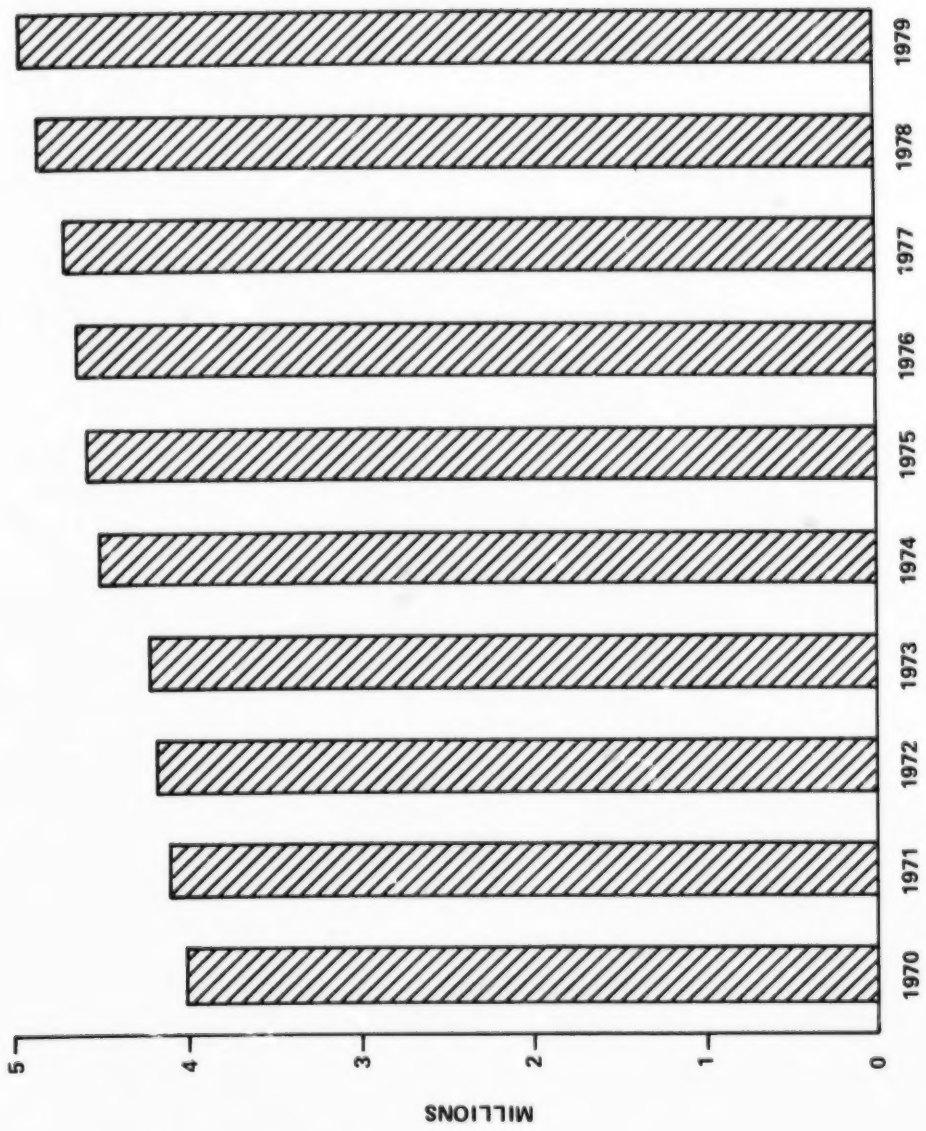


Figure 2-8 / Ontario's Population

The number of fatalities on Ontario roads (Figures 2-9 and 2-10) have remained relatively constant from 1976-1979 for all age groups.

The important conclusion that can be drawn from this analysis is that the safety problem is shifting from solely a child problem to a concern for all age groups. For example in 1970, before the "bicycle boom", the 15+ age group accounted for only 17% of the total injuries whereas its share had more than tripled in 1979 to 54% of the total injuries. It would, therefore, seem that the increase in bicycle use has been in the more mature age groups, which is consistent with the sales data.

2.3 Energy

Current availability forecasts and pricing of energy, particularly crude oil, has shrouded the future of traditional personal transportation modes in question. This section will attempt to put the bicycle into perspective in terms of the energy situation.

A) Energy Costs

The most obvious reason for taking a bicycle to work would be to save money in view of rapidly rising energy costs. Past experience has shown that commuters will not ride a bicycle to work voluntarily, preferring the safety, comfort and convenience of the automobile.

It is possible to estimate the cost of regular leaded gasoline from the recent Canada - Alberta pricing agreement (1981) for the next few years. Figure 2-11 shows the estimated prices for gasoline in the current dollar value for that year. It is necessary to assess the effect of inflation on these prices. Assuming people's incomes keep pace with inflation, the only real impact of higher prices will be the increases above the inflation rate. The following table presents the real effects of gasoline prices at an assumed inflation rate of 10% per year.

Year	Medium Price Forecast (¢/l in current $)	Current Values of 1981 Price (36.9¢/l) at 10% inflation	Current Values of Increase in price over inflation	Real Value of Increase (1981 $)	% Increase in terms of 1981 price
1981	36.9	36.9	0	0	0
1982	44.4	40.6	3.8	3.5	9.5
1983	51.6	44.7	6.9	5.7	15.4
1984	59.9	49.2	10.7	8.0	21.6
1985	66.6	54.1	12.5	8.5	23.0
1986	75.1	59.5	15.6	9.7	26.2
1987	85.0	65.5	19.5	10.9	29.5
1988	94.7	72.0	22.7	11.6	31.3
1989	102.9	79.2	23.7	10.9	29.5
1990	113.8	87.1	26.7	11.2	30.3

From the table it can be noted that there is expected to be an increase of 26.2% in the real price of gasoline in the next five years (1981 to 1986) or an average annual rate of 5.2% per year. The following table shows the effect of this increase for the average commuter in Ontario.

Factor	1981	1986*
Price (¢/l)	36.9	46.6
Average Trip Length (km)**	10.6	10.0
Average Number of Trips to Work	250	250
Kilometers Driven	5300	5000
Vehicle Efficiency (l/100 km)	19	17 (est.)
Fuel Used (l)	1000	850
Fuel Cost	$370/yr. ($7.11/wk)	$400/yr. ($7.69/wk)
Potential Savings of Bicycle Riding (30% of total trips, figure 2-2)	$110/yr. ($2.11/wk)	$120/yr. ($2.31/wk)
Increase in Savings	-	$10/yr. ($.19/wk)

* Expressed in terms of 1981 $

** Long terms elasticities indicate that workers will move closer to their workplace over time due to higher transportation costs.

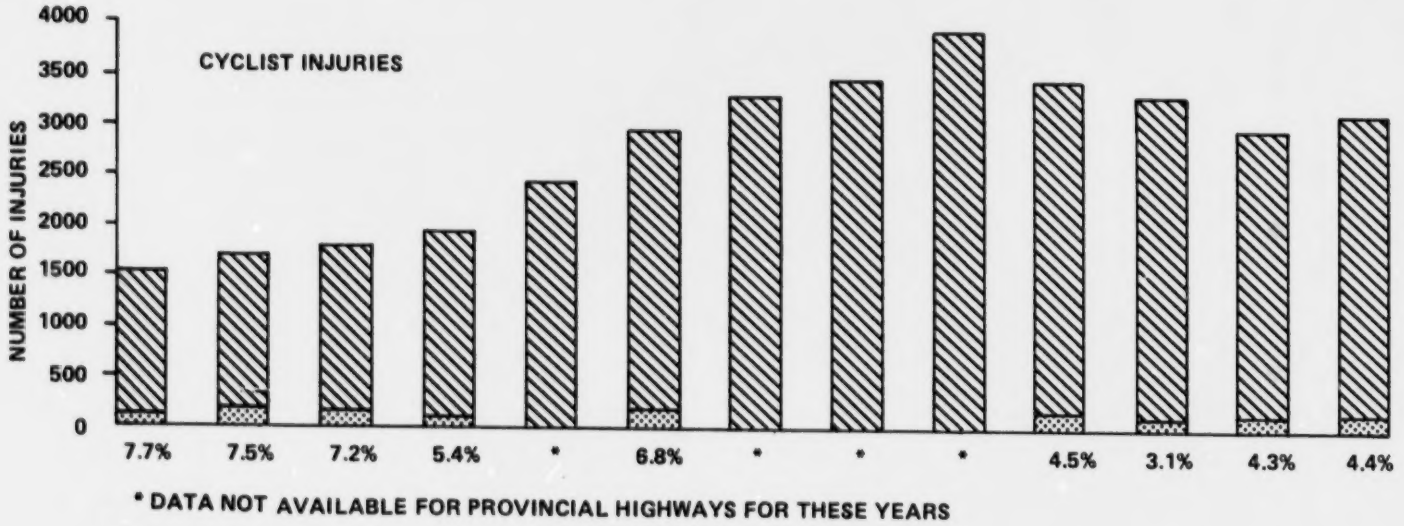


Figure 2-9 / Cyclist Injuries and Fatalities

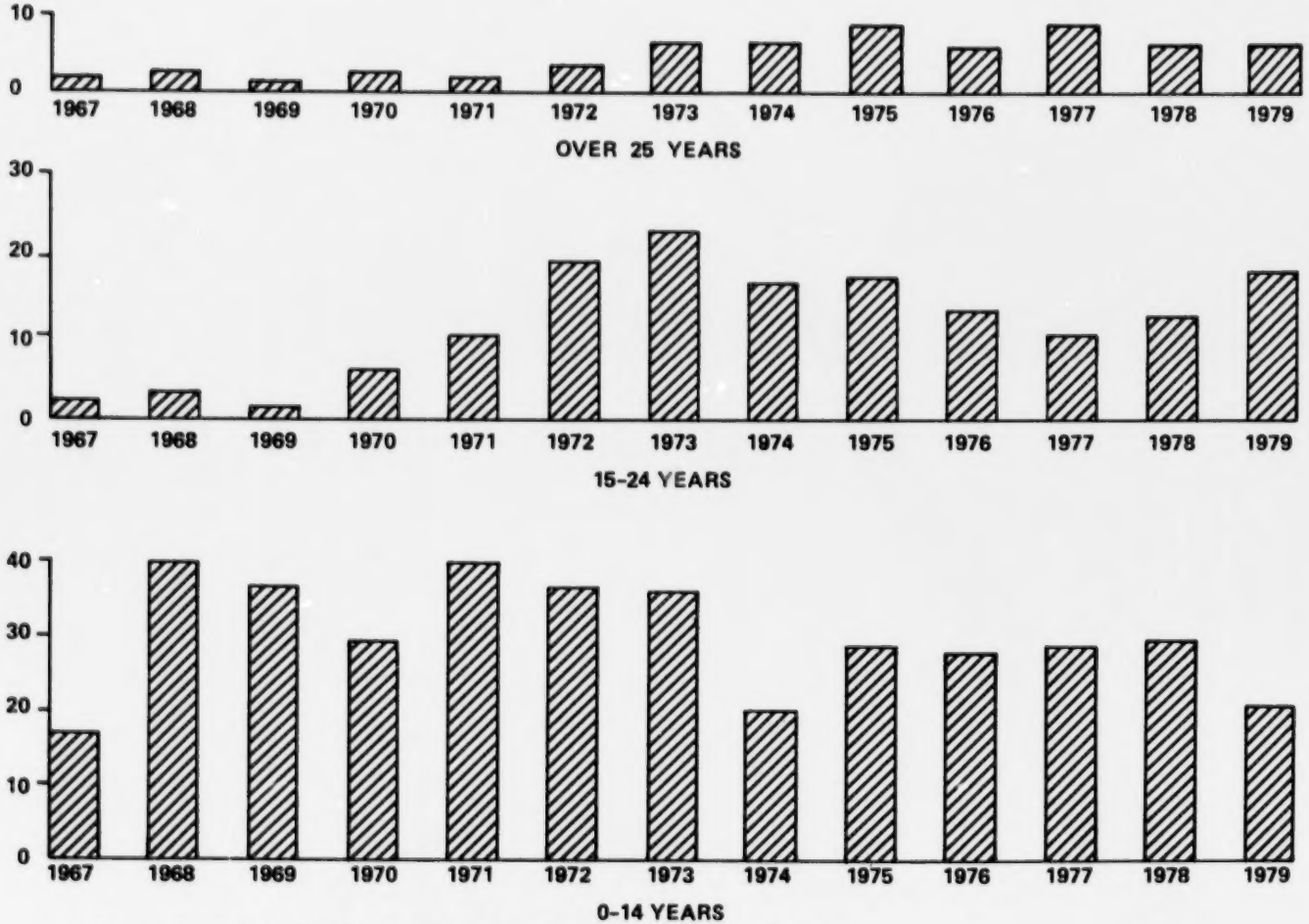


Figure 2-10 / Cyclist Fatalities by Age Group on all Ontario Roads

PROJECTED PRICES FOR REGULAR LEADED GASOLINE*

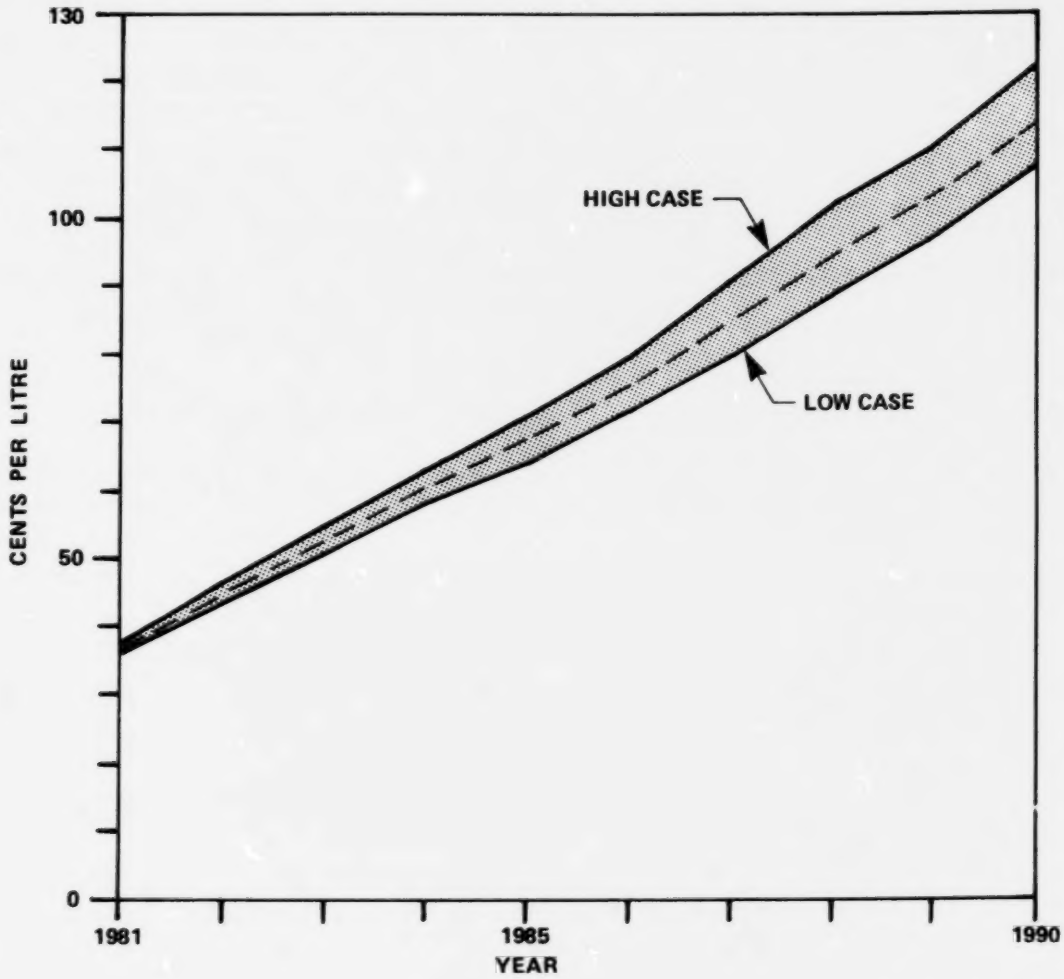


FIGURE 2/11

*Based the Canada–Alberta agreement of September 1981

The above chart shows that commuters will not experience large increases in gasoline expenditures due to pricing increases. They will be able, in large part, to offset the real cost increase in fuel by buying more fuel-efficient cars and, in some cases, by moving closer to work. There will still be some increase in transportation cost in spite of all the changes that the commuter will make. However, it is likely that the commuter will reduce his discretionary travel to offset cost increases before he turns to the bicycle.

In summary, the increasing price of gasoline may increase the average commuter's cost by only 10% in real terms over the next five years due to changing travel habits and the purchasing of economy cars. The magnitude of this change is insufficient to cause people to travel to work on a bicycle when other alternatives (eg. transit, GO service, etc.) exist.

B) Fuel Availability

If the price of gasoline will not cause people to ride their bicycle on essential trips then will the lack of fuel force them to use the bicycle or another mode?

Figure 2-12 illustrates the supply and demand forecasts recently published by the Canadian Federal Government. The graph shows that Canada's supply will overtake its demand within the next ten years. There is no long term incentive, therefore, to use the bicycle because of a lack of gasoline. There may be some shortfalls before the next ten years pass but the bicycle would not serve well as a contingency mode due to safety, health and trip feasibility (eg. length and weather) problems. Any trips diverted to bicycles in a shortfall would be helpful, however, if a severe shortfall did occur it would be essential that many motorist leave their cars at home and find alternative ways to get to work, leaving excess capacity on the roadway for bicycles. No separate facilities would, therefore, be required for contingency purposes.

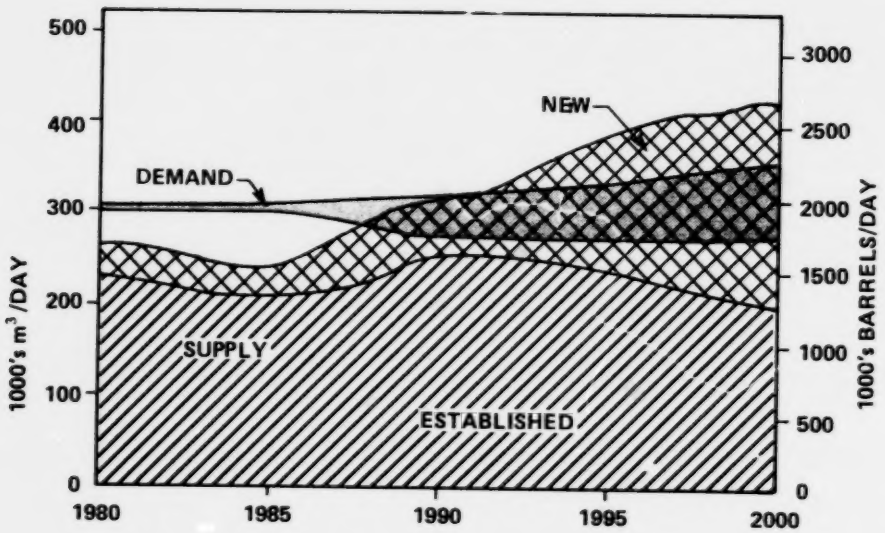


Figure 2-12 / Canadian Oil Supply and Demand Outlook

Recent experience in Calgary has shown that energy consumption has increased when bicycles are given general traffic lanes for their use only, due to the increased overall traffic congestion. Bicycle use should be allowed their own facilities only after careful analysis of safety and energy factors in addition to the cost considerations.

In summary, then, the bicycle cannot be promoted strictly in terms of fuel availability since the federal government's prediction is self-sufficiency by 1990. In addition the bicycle may be a net energy waster if it is allowed to conflict with other traffic.

2.4 Summary

The potential usage of the bicycle is constrained by weather, trip length and bicycle availability to less than 20% of the total commuter trips taken. In addition the actual usage is further constrained by attitudes, physical capabilities, and shower facilities at the workplace. Furthermore, it is unlikely that fuel costs or availability are going to force commuters to use the more economical bicycle.

In conclusion, then, the Ministry should not fund the bicycle as a viable mode of urban transportation.

3. Municipal Experience

The municipalities of Ontario are responsible for bicycle planning and construction of facilities. The following sections present case studies of the activities undertaken by some municipalities in the bicycle area.

3.1 Pittsburg Township

The Township of Pittsburg entered into an agreement with the M.T.C. in 1977 to provide a bicycle facility adjacent to a highway. The local council requested Kingston regional staff to design paved shoulders along Highways #2 and #15 just east of the City of Kingston. The Ministry notified the township that funding was not available to construct a bicycle facility. Pittsubrg township then agreed to pay the extra cost of paving the shoulder on both sides of the highways if the M.T.C. would carry out the construction of the facility as part of the reconstruction of the highways. The Ministry agreed with this proposal but decided not to sign the shoulders as a bicycle facility of to apply special pavement markings. The paved shoulders, then, would be available for all traffic to use.

The extent of the facilities are shown on the attached diagram (Figure 3-1). The route along Highway #2 is through, primarily, rural agricultural land. There are a couple of schools along the route and a small percentage of the students ride bicycles, the rest are bussed or walk. This facility also passes through the Canadian Armed Forces Base for quite some distance. Highway #15 is a more scenic route which passes near the Cataraqui River. There is a total of 11 miles of highway which have had their shoulders paved in Pittsburg township for use by the bicycle. The dotted line indicated on the map shows the circuit which bicycle riders could use for recreational purposes.

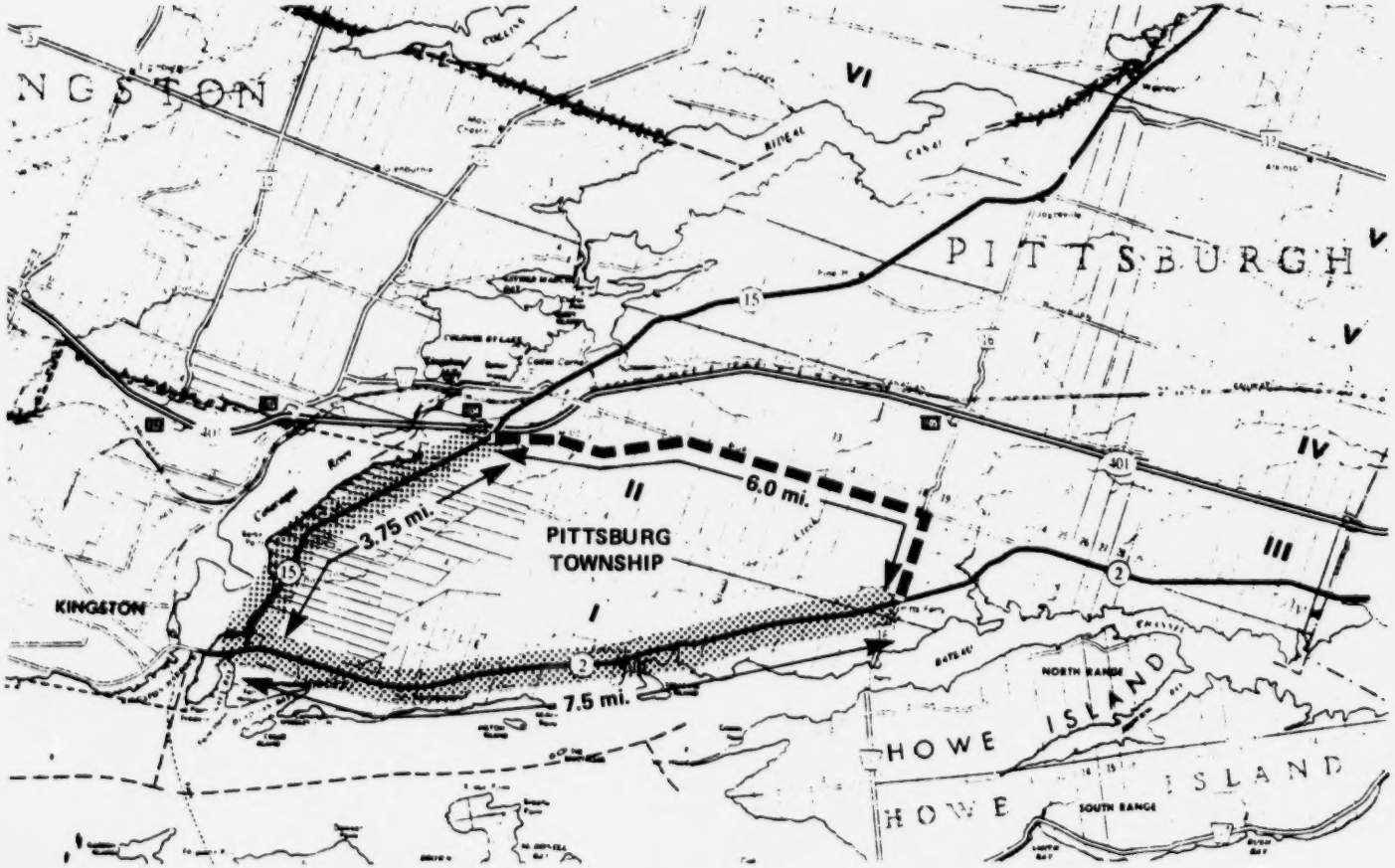


Figure 3-1 / Pittsburg Township Bicycle Path

The entire cost of the facility was borne by Pittsburg Township*; however, it is a one time cost which means M.T.C. pays for maintenance and resurfacing. The final cost to the municipality, in 1977, was $2700/mile of paved shoulder. The cost per mile is relatively low because the highway was to be reconstructed in any event.

There has been no survey of bicycle usage since the facility was construction, but observation by M.T.C. Regional Staff has shown that bicycle traffic has been light. The more scenic Highway #15 has a few more riders during the summer months.

The new facility did not fulfil all the objectives related to the bicycle in Pittsburg township as was hoped, for several potential reasons. First the paved shoulders are safer than driving on the highway but they are still perceived to be dangerous due to the high speed differential between the auto and the bicycle. Secondly, the bicycle facility is not connected to the City of Kingston across the Cataraquai River due to capacity problems on the bridge that crosses it. Thirdly the Highway #2 route is not as scenic as the Highway #15 route and there are very few other reasons to travel it. Finally the bicycle routes are through limited population areas where demand for bicycle travel is low. The M.T.C. has benefitted from the paved shoulders as they require less maintenance, are safer, offer better drainage, and provide longer surface life for the highway.

3.2 Ottawa

The Regional Municipality of Ottawa-Carleton (RMOC) has a system of bicycle paths and are encouraged enough with the current usage of them that the system is being expanded.

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* Due to the approval of a partial paved shoulder policy before construction M.T.C. paid for 2' to 3' of the additional shoulder pavement.

The attached map of the Ottawa area (Figure 3-2) shows the existing and proposed routes for the RMOC. The Region along with the National Capital Commission (NCC), are planning to spend $400,000 per year (1980 dollars) for five years to upgrade and expand the existing system. It is this ambitious expansion program that prompted the RMOC to petition the provincial government for financial support.

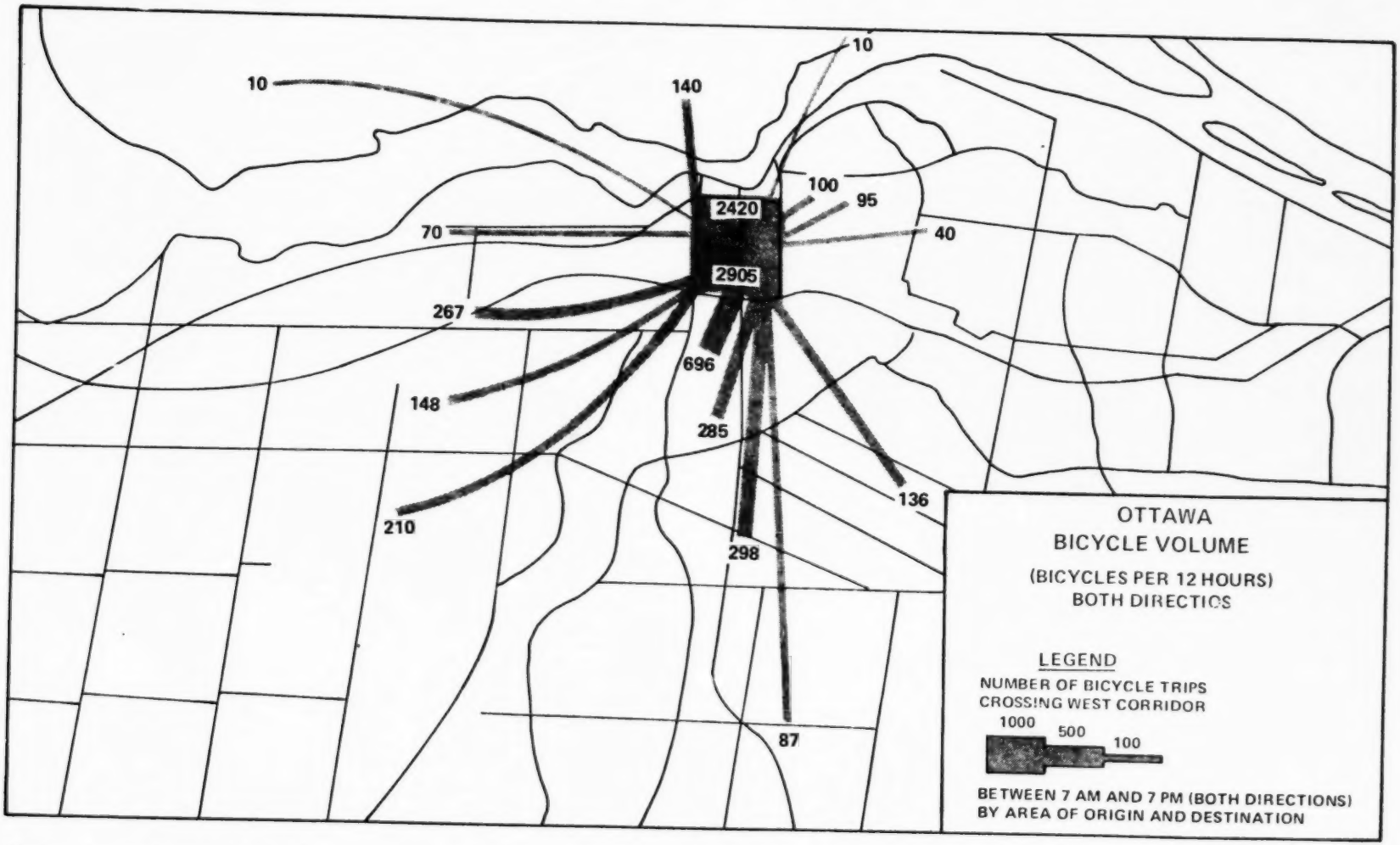
The usage figures shown on the illustrations that follow (Figures 3-3, 3-4, and 3-5) indicates that there is modest usage in the downtown area. A 12-hour volume in both directions of nearly 3,000 bicycles is significant, although a much higher volume is need to make an impact on auto traffic during the congested rush hour.

The Ottawa Region is a good example of what Ontario municipalities can do if bicycle facilities are placed high on their list of priorities. Although the National Capital Commission is involved in the funding in Ottawa, other municipalities could provide facilities that would cater to the cyclists in their communities.

3.3 Metropolitan Toronto

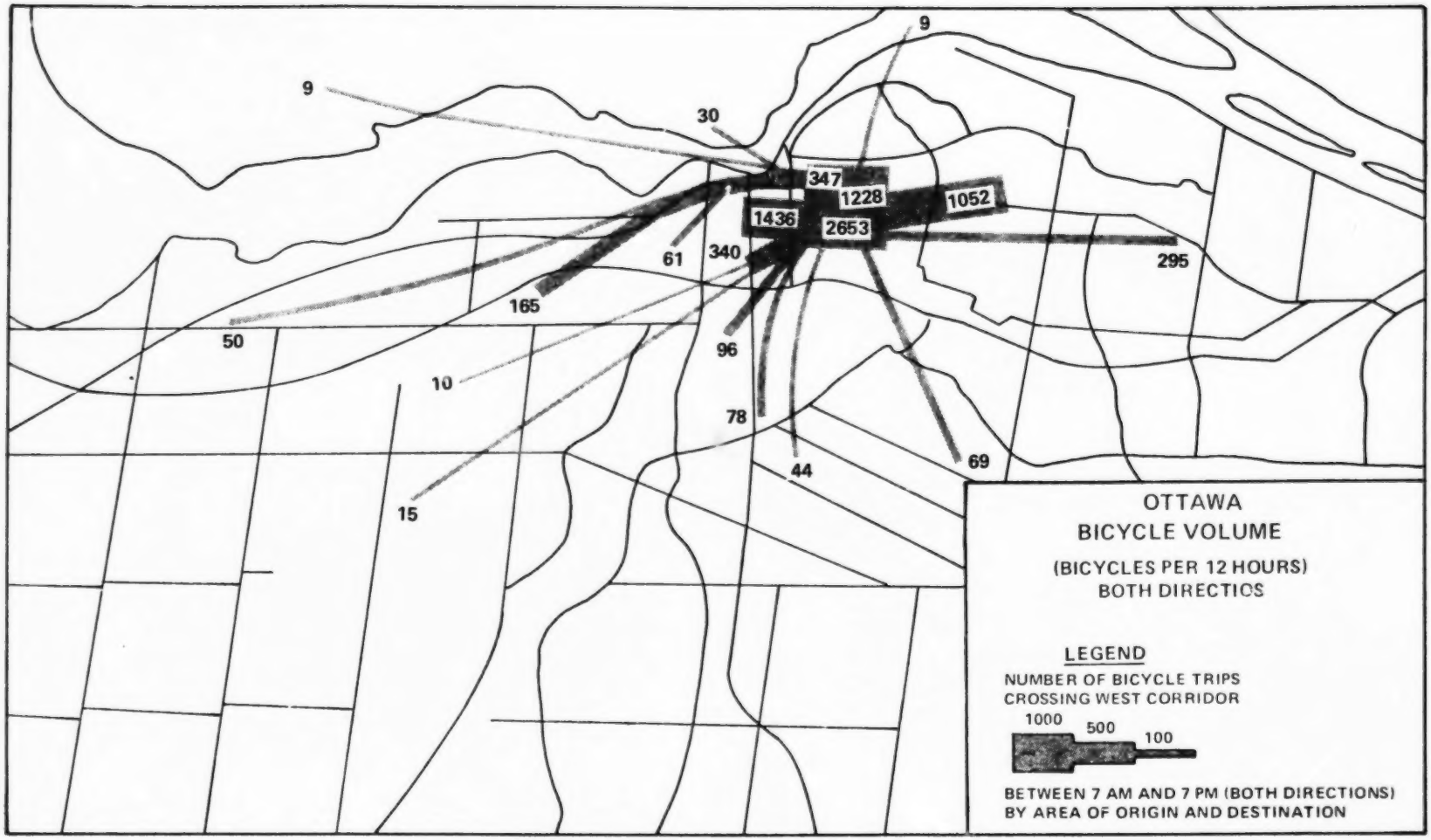
Ontario's largest municipality also has a bicycle path system in place and is in the progress of expanding it. In 1975 a budget of $1.8 million was approved to upgrade the system and in 1980 this figure was increased to $2 million dollars. The existing and proposed system is shown on Figure 3-6.

The paths were constructed on the right-of-way of Metropolitan roads; Metropolitan park lands; Ontario Hydro and CN/CP Railway rights-of-way; and Metropolitan Toronto and Region Conservation Authority lands; as well as on local streets and parks. The resultant system is largely scenic and ideal for the recreational cyclist. It is Metro's objective to provide facilities for recreational and health reasons.



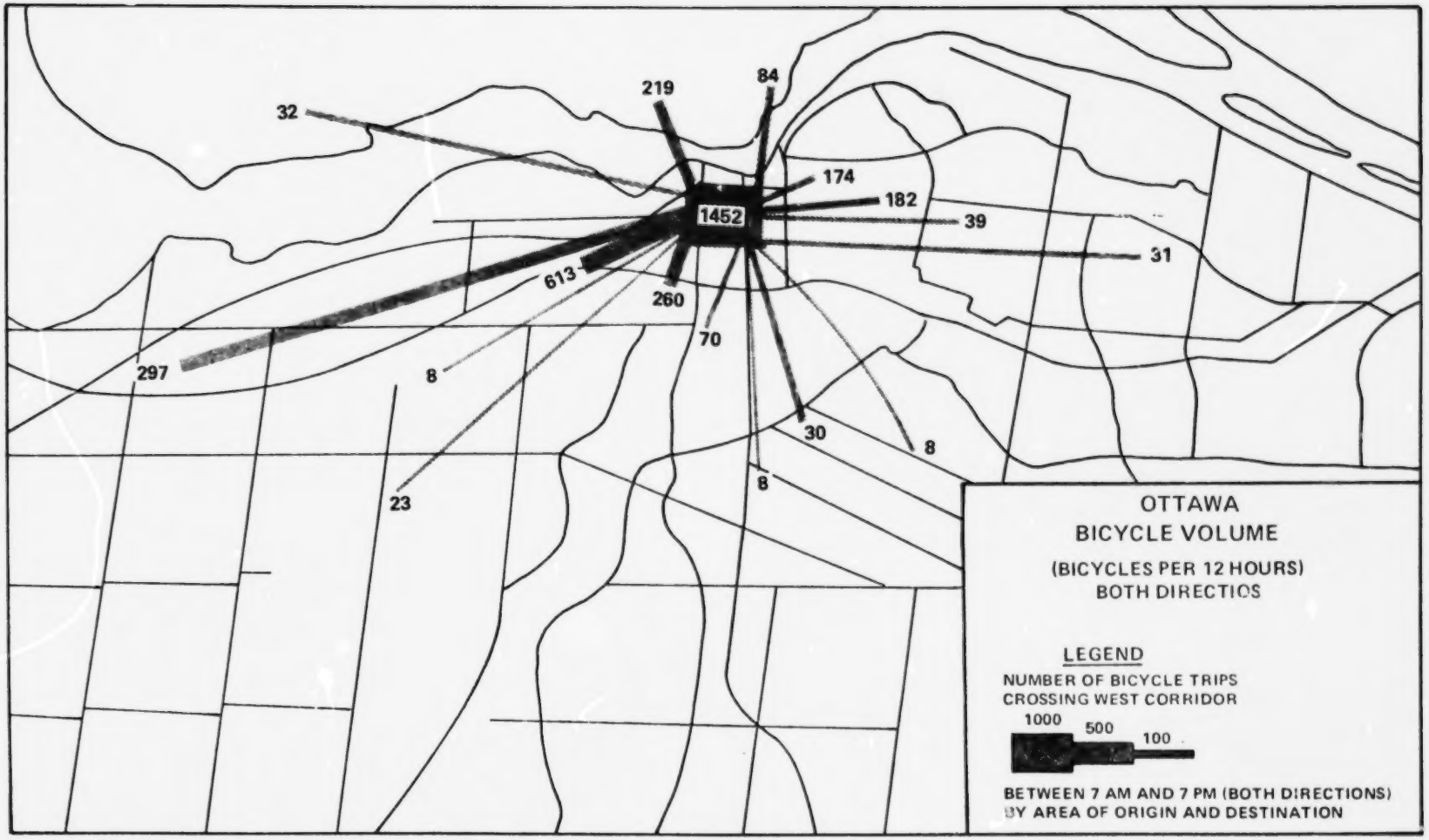
Source: Regional Municipality of Ottawa– Carleton

Figure 3-3 / Bicycle Crossings – South Corridor



Source: Regional Municipality of Ottawa– Carleton

Figure 3-4 / Bicycle Crossing — East Corridor



Source: Regional Municipality of Ottawa– Carleton

Figure 3-5 / Bicycle Crossing — West Corridor

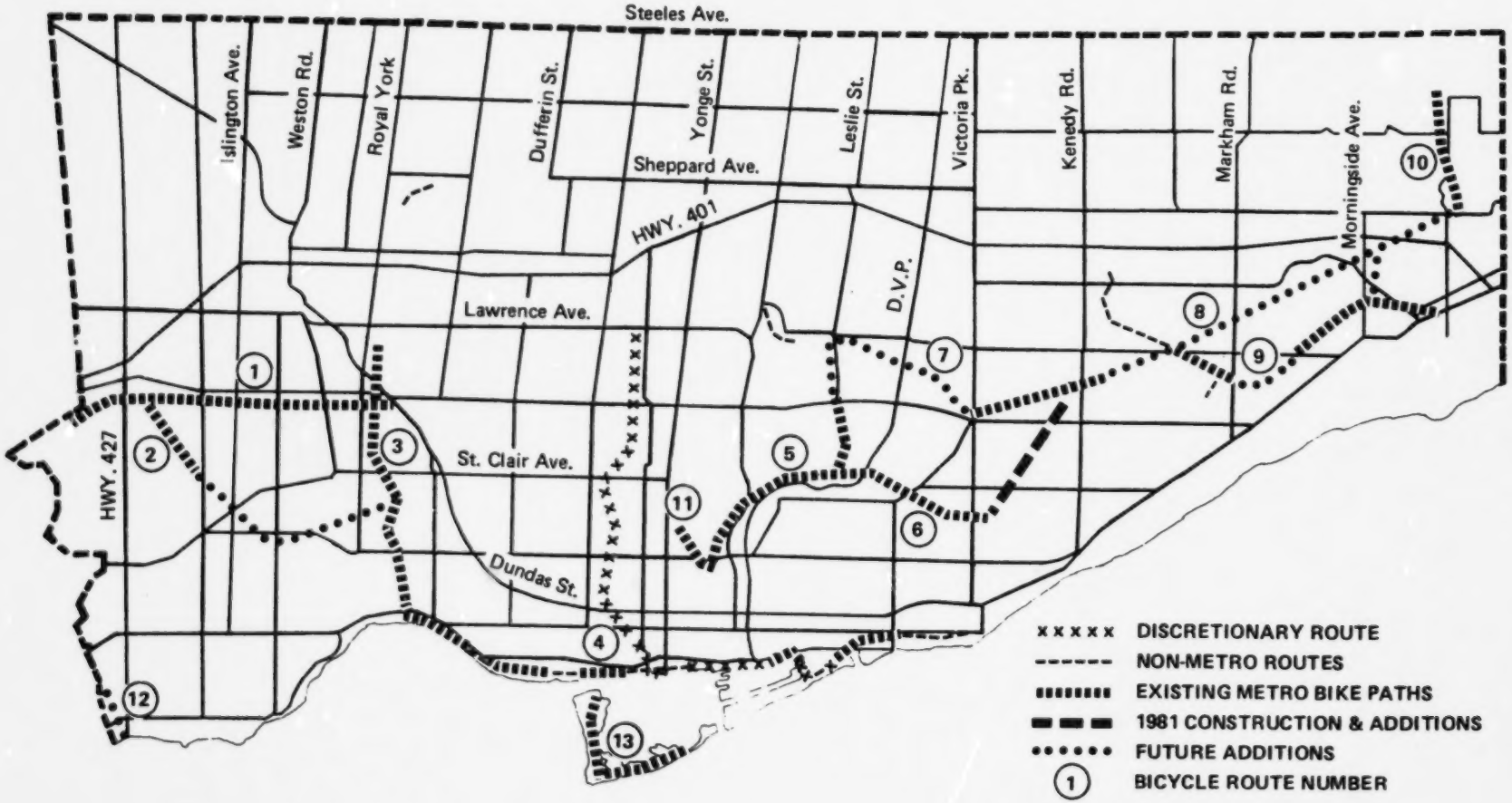


Figure 3-6 / Metropolitan Toronto Bicycle Paths - Existing and Planned

3.4 Richmond Hill

In 1981, the town of Richmond Hill entered into an agreement with the Ministry of Transportation and Communications on a bicycle path. The approximate location is parallel to Yonge Street originating at the Major MacKenzie Road and running 8 km south to a plaza on the east side of the street.

The town applied for, and received, an encroachment permit from the M.T.C. District Office to construct the hard top bicycle path on the highway right-of-way. Richmond Hill paid 100% of the construction costs and will incur all future maintenance costs.

If the highway facility is widened in the future, as is planned, there will not be sufficient space for the bicycle path on highway property. A condition of the permit allows for removal of the facility in this eventuality.

In general, right-of-way purchases by the M.T.C. are determined by estimating the future property needs of the roadway. As such, there should not, ordinarily, be surplus land relative to ultimate requirements on which to build a bicycle path. Also, the Ministry may meet with considerable public resistance when, and if, it attempts to remove the facility for future expansion of the roadway, regardless of the legal conditions that may have been stipulated in the original encroachment permit.

Recommendation

Encroachment Permits may be issued to municipalities for the provision of bicycle facilities on M.T.C. right-of-way but only after all of the following requirements have been fulfiled.

a) The municipality agrees to pay 100% of construction and maintenance costs.

b) There is no suitable municipal land available that could be used to achieve the same purpose.

c) The Ministry is satisfied that future route requirements on the right-of-way are not unduly jeopardized and that the facilities can be located such that the Ministry's safety requirements are met.

d) The municipality is made aware of and agress with the cancellation and removal powers of the Ministry as set out in the permit.

3.5 Summary

Ontario municipalities have constructed bicycle paths when there has been a demand for them. Most of the separate facilities are designed for recreational purposes but some have the commuter in mind. The facilities that have been constructed have not solved any urban transportation problems to any significant degree and, therefore, the total transportation system has not benefited substantially from them.

4. Recommended Policies

A) General Policy

1) Bicycle planning will continue to be eligible for subsidy as one element of municipal planning studies. Municipalities, however, will be totally responsible for the construction and maintenance of bicycle facilities.

2) This Ministry will continue to:
   a) Promote bicycle safety, in the broader sense
   b) Promote the education of cyclists and motorists alike, stressing the necessity that each acknowledge the road-use right of others.

3) Bicycle safety education will continue to be made available to all elementary school children through programs of the Ministry of Education.

B) Specific Policy

1) It is not the policy of this Ministry to provide paved shoulders on highway for bicycle use.

2) Encroachment Permits may be issued to municipalities for the provision of bicycle facilities on M.T.C. right-of-way but only after all of the following requirements have been fulfiled.
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   b) There is no suitable municipal land available that could be used to achieve the same purpose.
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   d) The municipality is made aware of and agress with the cancellation and removal powers of the Ministry as set out in the permit.

3) Traffic control devices that pertain to bicycles and appear in the current edition of the Manual of Uniform Traffic Control Devices, Ontario (MTC) are eligible for municipal subsidy when erected on a roadway.

4) Local municipalities may designate, for the exclusive use of cyclists, any lane of a highway under its jurisdiction which has been divided into clearly marked traffic lanes. (The Highway Traffic Act, Section 133, Clause (c)).

Ministry of Transportation and Communications

Ontario

MINISTRY DIRECTIVE

Program: _____

_____

Directive: _____

Issuing Authority: ADM, Provincial/Municipal Transportation

Date of Issue: _____ Effective Date: _____

TO: Executive Directors, Regional Directors, Directors, District Engineers, Regional Managers Drivers and Vehicles, Office Managers

SUBJECT: Bicycling: Provision of Facilities; Safety; Energy Consideration

ALTERNATIVE INDEX LISTING(S): Policy Review: Bicycling and Bicycling Facilities

Reference:

1. This directive supersedes and cancels Circular PD-77-02.
2. Further background information may be found in the report entitled "Bicycle Policy Review - An Update" dated 1981.

Purpose:

The purpose of this directive is to inform Ministry staff of the Ministry's current policy regarding bicycling and bicycling facilities.

Introduction:

This Ministry's position with respect to bicycles is reviewed periodically to determine if revisions to the policy position are required. The most recent review was undertaken to examine usage levels, to address pressure from the general public, to respond to an Association of Municipalities' petition initiated by the Region of Ottawa-Carleton and to monitor the effect of bicycle travel due to the current energy situation.

The findings of the review were presented to the Municipal Transportation Planning Committee in October of 1981. The following policies are endorsed by that Committee.

Policies:

A. General Policy

1) Bicycle planning will continue to be eligible for subsidy as one element of municipal planning studies. Municipalities, however, will be totally responsible for the construction and maintenance of bicycle facilities.

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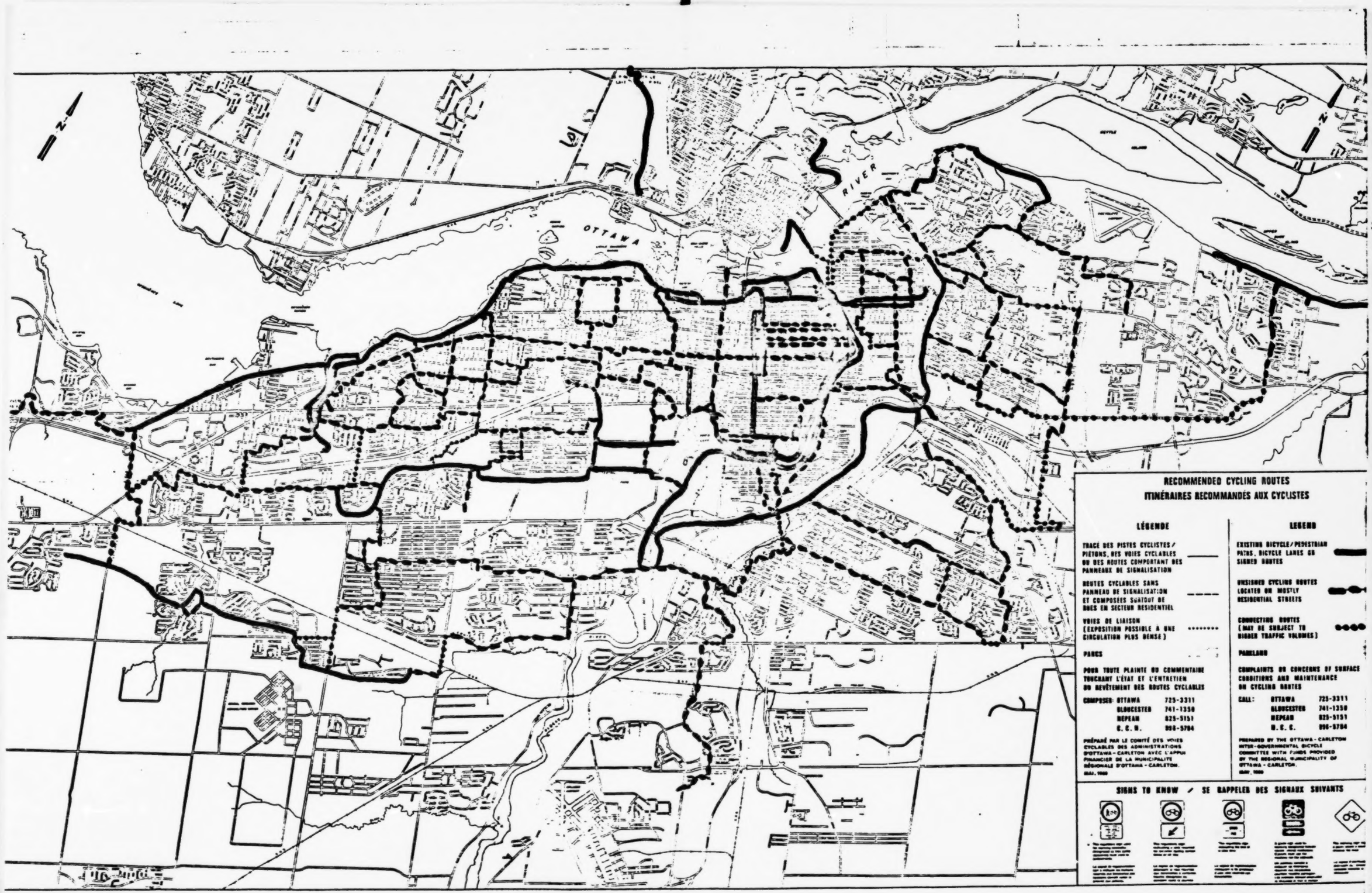
OTTAWA
RIVER
RECOMMENDED CYCLING ROUTES
ITINÉRAIRES RECOMMANDÉS AUX CYCLISTES
LÉGENDE
TRACÉ DES PISTES CYCLISTES / PIÉTONS, DES VOIES CYCLABLES OU DES ROUTES COMPORTANT DES PANNEAUX DE SIGNALISATION
ROUTES CYCLABLES SANS PANNEAU DE SIGNALISATION ET COMPOSÉES SURTOUT DE RUES EN SECTEUR RÉSIDENTIEL
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SIGNS TO KNOW / SE RAPPELER DES SIGNAUX SUIVANTS